

## **MOTOR DRIVE CIRCUITRY WITH REGENERATIVE BRAKING FOR DISK DRIVE**

### **ABSTRACT OF THE DISCLOSURE**

During normal operation of a hard disk drive, control logic controls a plurality of switching elements to provide electrical power to a spindle motor and head motor of the disk drive from a voltage source coupled to first and second voltage supply nodes (e.g., Vcc and ground), the spindle motor has a set of motor windings to which the electric power is applied to rotate the spindle motor, and the control logic is configured to enter a regenerative braking state during normal operation where the switching elements are controlled to isolate the spindle motor from the first voltage supply node and cause regenerative braking of the spindle motor so that kinetic energy due to rotation of the spindle motor is converted to electrical power that is supplied to the head motor by virtue of inductance of one or more motor windings in the set.

(FIG. 6)

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